

Serial No. 10/538,413
Atty. Doc. No. 2002P84076WOUS

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REMARKS

Claims 14, 15, 17 and 20 are amended herein, claim 22 is canceled, and new claims 23 and 24 are provided for consideration. After entry of these amendments and new claims, claims 12-21, 23 and 24 are presented for examination. Applicants respectfully request allowance of the present application in view of the foregoing amendments and the following remarks.

Applicants also note that the attorney docket number properly is 2002P84076WOUS, not "2004P84076WOUS" and respectfully request that future Office Communications be so marked.

As to new claim 23 and 24, support for the added limitation is found in the last sentence of numbered paragraph 0030 of the published application corresponding to this application, and in FIG. 1 to which that paragraph refers. This orientation of the noted features clearly is not taught by the cited references.

CLAIM OBJECTIONS

There stands an objection and related inquiry to claims 17, 18, and 22 pertaining to the scope of the claims, particularly as to whether these are to be considered claims to the brush seal as a subcombination or to the brush seal and a rotor or stator with which it may be associated in a turbine. To address this, claim 17 is amended to emphasize the relationship between adjacent brush ring carriers of a brush seal subcombination and to clarify that reference to a stator is merely a reference point placing no limitation on the subcombination. As clearly appreciated in the specification and the art in general, the subcombination is for placement to seal a gap between a stator and a rotor, and incidental reference to either the stator or the rotor in a claim need not confound the scope of the claim.

Along these lines, claim 18 is presented without amendment. It is respectfully asserted that the claim as it stands clearly is presented as a claim to the brush seal itself. The reference to the "direction of the rotor" is merely using the rotor as a location reference point which, given the nature of the art, is well understood.

As to claim 22, this claim has been canceled, rendering this objection moot.

Reconsideration and withdrawal of the above-noted objections to claims 17 and 18 are respectfully requested.

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CLAIM REJECTIONS UNDER 35 USC 112

Claims 15, 17 and 20 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention.

As to claim 15, this claim is amended to clarify the respective brush ring carriers, and support for this is found in claim 12 from which claim 15 depends.

As to claim 17, this is amended in part by amending to depend from claim 14 which recites "circumferential slot" and "latching nose." As to "the newly pushed-on ring carrier" limitation, claim 17 is amended to remove this limitation and use "an adjacently arranged" to better define the adjacent brush ring carrier. This is well-supported in the specification and figures. Also, the term "a plurality of brush ring carriers" is added to the claim. This is well-supported in the specification and figures, and follows from claim 12, which recites "at least two annular brush ring carriers," it being recognized that the plurality is inclusive of this recitation in claim 12.

As to claim 20, the limitation "support plate" is added and amendments are made to clarify the "and/or" issue.

In view of these amendments, reconsideration and withdrawal of the above-noted rejections are respectfully requested.

CLAIM REJECTIONS UNDER 35 USC 103

Claims 12-22 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Walter et al. (US 3,773,336) in view of Langston et al. (US 6,623,238).

As to independent claim 12, from which claims 13-22 depend directly or indirectly, page 4 of the Office action recites an alleged matching of limitations between claim 12 and the Fig. 6 embodiment of Walter et al. However, no matching is explicitly provided for the claim 12 limitation "wherein the second brush ring carrier is fixed to the first brush ring carrier by an unreleasable snap connection." Only a notation is provided "including the ring being a lip ring (Fig. 6).

As to the Walter et al. embodiment not meeting the claim as alleged to meet it, first and critically, a lip ring as shown in Fig. 6 is not synonymous with an unresealable snap connection.

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The construing of Walter et al. to provide a lip ring type of seal does not teach all limitations of claim 12. There is not teaching that the structures in Walter et al. comprise any kind of a snap connection. On this basis alone, the rejection using Walter et al. must be withdrawn.

Second, as to combining the references, there is no suggestion, teaching or motivation to combine the cited references. The Office action does not provide one, and accordingly, there is a failure to establish a prima facie case of obviousness.

Further and more particularly, Walter et al. is directed to shaft seals with the examples being the propeller shafts of ships. These are taught to use spring-loaded sealing rings (col. 2, line 59 to col. 3, line 10), and it is appreciated that such rings are needed to restrict the passage of water that may travel along the shaft being contained within the stern tube seal apparatus (i.e., within the bush 17). Clearly, to combine these references in an attempt to reach the limitations of claim 12 teaches against the intended purpose of Walter et al. to restrict water passage, that is, the proposed modification renders the prior art unsatisfactory for its intended purpose (see MPEP 2145 X.D.). This is because if one were to substitute brush seals of Langston et al. for the sealing rings of Walter et al., the brush seals, having spaces between components of the brush itself, would readily allow passage of water, whereas as noted the spring-tensioned sealing rings are designed to restrict water passage.

For the above reasons, taken together or in any combination, Applicants respectfully request the withdrawal of the rejection of claim 12 and claims depending from it, namely pending claims 13-21.

Further as to the specific points of rejection of claim 14, Applicants respectfully dispute the assertion that Walter et al. provides a "shoulder with a circumferential slot (K)." A slot may be defined as a "narrow notch, groove or opening" (Webster's New World Dictionary, 2nd Ed.) The flat expanse identified as I in Fig. 6 has only one raised boundary, the upper surface of J, and lacks a second opposing boundary that would define a slot, such slot being a narrow notch or groove. Also, Applicants respectfully dispute the assertion that Walter et al. provides a "latching nose" since a latching nose cannot reasonably be stated to be that "portion of element C attached to element J." A latch, when referring to a fastening for a door or a gate, in part is stated to consist of "a bar that falls into a notch in a piece attached to a doorjamb or gatepost". (Webster's New World Dictionary, 2nd Ed.) Again, the concept of a notch, being a "narrow pass with steep

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sides" or a "gap" does not comport with the stated features of Fig. 6 since there is no slot or notch into which may fit the noted portion of element C. Therefore, based on one or both of these issues, in part based on common understanding of the meaning of relevant terms, these bases for the rejection of claim 14 should be withdrawn.


Similarly, and for the reasoning stated immediately above, the rejections of claims 15 and 17 also should be withdrawn. As to the other specific rejections of the dependent claims, these are considered overcome based on the argument above regarding claim 12.

Conclusion

Having overcome the rejections, allowance of the claims as amended is respectfully requested. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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